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The Role of Transfer of Learning in Multilingual Instruction and Development

My major research interests lie in multilingual language acquisition and the use of qualitative methods as data collection tools. The selection of this article for inclusion in the present volume was dictated by the fact that it bridges my earlier research in multlinguality and the use of simultaneous introspection as the main research method with my present interest in the same topic investigated by means of narrative texts and emphasizing the role of affectivity of the multilingual user and learner of varied languages. Additionally, the present text demonstrates that investigating second and further language acquisition/learning needs to be studied not only on the level of language production and cross-linguistic consultations performed by learners but from a multidisciplinary perspective. More precisely, this text demonstrates how the findings of educational psychology can inform research on language acquisition and more importantly contribute to classroom practices in the context of formal instruction for multilingual language learners. More recent studies take into consideration individual learner differences regarding affectivity.

1. Introduction: context of the study

The major concern of this article is very much grounded in the context of foreign language education in Poland, specifically the introduction of two obligatory foreign languages into the school curriculum. As the consequence, foreign language teachers come into contact with learners whose assumed language ability and awareness have been enhanced by exposure to a larger number of languages and greater development in learning experiences. It might be assumed that these learners will be able to use their resources more effectively and efficiently but is this really the case? And if it is not, what needs to be done to make it so.

The main assumptions of so-called plurilingual education promoted by a number of language awareness programmes run in Europe, such as for example *Janua Linguarum — Jaling* (Gateway of Languages) at the European Centre of Modern Languages in Graz (2000—2004) advocate:

> […] the study of different languages where the students are only exposed to them without learning and encouraged to use discovery techniques, such as analyzing, comparing and finding similarities and differences,(it) will help the pupils to learn foreign languages and make them better aware of their mother tongue (Szpotowicz, 2006:25).

The programmes reported on by Szpotowicz (2006) focus on the primary level of teaching and the curricula where children at the beginning of their schooling not only learn two foreign languages but are also taught courses in language awareness. Taking into consideration something that we all agree about, that children learn by playing with the language and creating new forms, by exposure and by discovery, by having no inhibitions and a high degree of tolerance of ambiguity, Szpotowicz (2006:25) also justifies the introduction of awareness courses for this age group by saying:

> […] children are naturally equipped with this tolerance of [sic] unknown and the ability to extract/fish out the message even from a very difficult text and ignore the amount of strange and unclear information. Children also have their natural readiness to learn language, because their mother tongue development is still in progress.

Programmes of language awareness do work with children and make them more sensitive language learners in their future learning experiences. Do other age groups of FL learners need such programmmes? Or do they develop their awareness with growing learning experiences of different languages? My experiences suggest that adult multilingual language learners do not necessarily become efficient language learners with every consecutive language acquired.

This article is also stimulated by my former studies on multilingual learning experiences which investigated cross-linguistic consultations (language transfer), language awareness and metacognitve knowledge of multilinguals in the context of formal language instruction, i.e. the classroom learning of L3 (Gabryś-Barker 2005). The data collected showed that multilinguals perform better if they transfer their learning experiences from the L2 context into L3 learning. However, it was observed that this does not occur as frequently as might be expected in linguistically aware and already proficient users of one foreign language. The process of L3 learning seemed to be greatly impeded by the inability to reflect explicitly upon strategies of learning and making use of the reference system at their disposal, such as that of another foreign language, and this is even the case when it is a typologically close language (say, English and German). The above was most evident in the context of language tasks in which the language input was in the subjects' L1 (Polish), which seemed to inhibit the activation of the subjects' L2 reference system.

This study sets out to discuss the relevance of the principles and assumptions adopted by research in the area of educational psychology, which are generally applied in pedagogy but not necessarily in glottodidactics. I feel that this neglected area in the FL instruction branch of psychology can contribute significantly to what we know about the processes involved in learning and consequently its findings applied in foreign language instruction — here, multilingual learning and teaching. The focus of discussion will be on the transfer of learning, a phenomenon:

> […] as diverse as the direct application of techniques learnt in one context in another, transfer of general problem-solving strategies, change in the way in which individuals approach learning, and the affective changes such has greater interest or confidence (Salomon and Perkin, 1987:458).

Seifert (1991: 180) emphasizes that the main role of school — in other words of formal instruction — is the development of this ability in learners to transfer knowledge and skills beyond the school context. "Transfer is crucial to make school worthwhile."

2. The concept of transfer of learning and its theoretical principles

2.1. Understanding the concept

When discussing the process of learning, be it a science subject or a foreign language, the focus is not only on the present state and the factors that might influence it but also on what comes before and after (Włodarski et al., 1996: 13). The influence of before is called transfer of learning and after proactive interference. These two are very difficult to separate and a number of psychologists and applied linguists (among them, Marton, 1978 and Dempster and Cooney, 1982) treat them as homogenous/synonymous phenomena in the teaching context. However, transfer relates to the influence of previously learnt knowledge and ability on ones to be acquired in the present, whereas proactive interference relates to effects and is measured by the effectiveness of transfer. I would like to follow the former approach as the discussion here focuses on didactic context.

Transfer of learning (TL) can be looked at from various perspectives. One of them obviously relates to its effects. For example, already acquired knowledge may affect new learning in two ways — it may either facilitate it (positive transfer) or impede it (negative transfer). The factors determining positive influence will be discussed later. Transfer of learning can be also discussed from the perspective of "what is transferred:"

> General transfer is said to occur when students learn general principles or attitudes that they apply elsewhere. Specific transfer is said to occur when students learn specific facts and techniques and then use them in new situations that contain the same elements or features of the original learning situation (Seifert, 1991: 180—181).

So as we can see, general transfer relates to the whole context of "learning to learn," which may involve learners' ability of planning, organizing and evaluating themselves. Specific transfer is much narrower and reflects the possibilities of transferring knowledge in certain areas of similarity. The division into general and specific transfer is expressed by two alternative theories respectively: the *theory of formal discipline* and the *theory of identical elements.*

The theory of formal discipline claims that:

> […] the human mind contains a few — perhaps only one — general ability, which teachers can develop by teaching certain school subjects. Classical languages and mathematics were once supposed to build students´ abilities to think and reason about a wide variety of problems, including problems only distantly related to languages or mathematics (Seifert, 1991: 181).

Various experimental studies at the beginning of the 20th century (e.g. Thorndike, 1931, 1932) discarded the theory. There was no positive correlation found between the development of thinking and intelligence and the study of certain school subjects. This theory, however, has evolved and resulted in the belief that certain general abilities in critical thinking and problem-solving (which can be developed in the school context) can be transferred to different contexts of learning — and consequently of human functioning.

The belief in specific transfer was formulated as the theory of identical elements (Thorndike, 1932):

> […] only those specific aspects or elements of a learning situation are transferred that resemble those to which the learning is applied […] teachers should make classroom instructional goals and learning conditions as similar as possible to those that students are likely to face elsewhere (Seifert, 1991: 182).

It seems that both of the theories take extreme positions concerning the phenomenon and applicability of transfer of learning. So predictably, a golden medium theory was established, the *theory of generalized principles* (Royer, 1980), which had more classroom applicability. Seifert (1991: 183) summarizes the main assumptions of the theory:

> […] students extract principles that are neither as universally applicable as formal disciplines nor as specific as identical elements. Transfer happens when students apply these moderately general principles to new problems or situations. Teaching for transfer should therefore concentrate neither on developing some comprehensive problem-solving ability nor on guessing the exact information and skills that students will need some day. Instead, it should highlight general problem-solving strategies and key knowledge in each particular subject matter and give students practice in transferring these to other, appropriate problems.

2.2. Mechanisms of TL from different perspectives (in brief)

The mechanisms involved in transfer of learning have not been satisfactorily investigated (Włodarski et al., 1996: 86) and both perspectives, the behavioristic and the cognitive, are shown to be relevant and valid in explaining the phenomenon of TL. The *behavioristic approach* to TL relies heavily on the identical elements theory as the necessary condition for TL to occur, which means that it focuses on the specific type of transfer (Włodarski et al., 1996). It is assumed that in a new learning context, a learner uses specific similarities or identical elements between the past experience and the new one by analogy and using his analytical thinking. The focus is on the context (a learning situation) and the (learning) task itself.

The *cognitive approach* relates to generalized principles formulated by the learner and his or her ability to transfer them into a new learning situation by synthesizing (thinking holistically). It assumes the importance of the active involvement of the learner in hypothesizing, solving problems and using appropriate methods and strategies. It implies the use of appropriate systems of coding information: interpreting and grouping data, which are seen as the major variables explaining TL. These variables are characterized by their dynamic character, originating in their constant restructuring of knowledge under the influence of new learning experiences. Positive transfer can be observed when an appropriate, previously acquired, system of coding is used, whereas negative TL occurs when inadequate systems are used.
In sum, the cognitive approach to TL assumes individual learner differences to be responsible for TL, whereas the behaviorist one focuses on the significance of the external variables of context and task to be performed.

2.3. The Dimensions of TL

Transfer of learning is seen as operating at the sensory-motor, cognitive and socio-affective levels (Włodarski et al., 1996: 16), the latter one being only recently recognized as operative. The studies of TL within the sensory-motor domain of human

functioning relate to the developmental aspects of an individual, for example a baby and the way it uses its senses and develops its cognition of objects and their symbolic representation, both within one sense (intrasensory transfer) or across senses (cross-modal transfer) (see Steinberg, 1974). However, it is the cognitive level that is extensively explored in the field of cognitive psychology research. This relates to the ways knowledge is acquired and the crucial roles of experience and strategies of acquisition/learning (Włodarski et al., 1996: 18). This research focuses mainly on problem-solving and strategies of remembering.

Problem-solving tasks are described as those allowing the learner to construct models (also using symbols) and algorithms, and testing their application in different learning contexts. Also they allow for experimenting — formulating objectives and hypotheses, planning and carrying out experimental projects. Here, the research on TL is dominated by two areas of interest:

- the correlation between the characteristics of problem-solving activities in terms of their formal structure, content similarity and ways of presentation and the degree of TL (examples of such studies: Houston, 1982; Steinberg, 1983);
- the relation between the type of activity in the process of problem-solving and the intensity of transfer (example of such studies: Laughlin and Sweeney, 1977).

As far as strategies of remembering are concerned, TL is investigated at three different levels of their functioning:

- general cognitive development;
- learning experience;
- changes in metacognition (Laughlin and Sweeney, 1977).

The research on strategies of remembering/memory strategies reported is very extensive and perhaps constitutes one of the major interests in SLA/FLL studies, due to the fact that learner autonomy and its development by means of "learning to learn" training programmes are so broadly promoted. These studies, as we know, concentrate on demonstrating the effectiveness of different ways of storage and retrieval from memory in different contexts and by learners with different profiles. What further research is needed is the demonstration whether and if so, how and to what extent, these processes can be transferred to different contexts and what variables may facilitate — and which will inhibit — the process of transfer. Transfer of strategies applies directly to the FL classroom instructional context — and beyond it, in plurilingual language development.

The third level of TL recognized in cognitive psychology and educational psychology, i.e. socio-affective transfer, also relates directly to classroom settings. It allows an individual to use his/her experience of interacting with others, cooperating and competing in ways occurring outside the classroom setting, and to overcome communication barriers. It plays a significant role in the development of individual and also group (classroom) dynamics. However important this is, it is not the focus of study here.

2.4. Variables influencing transfer of learning

Educational psychology, following debate and research within psychology, looks at TL as determined by the whole multiplicity of interacting variables which contribute either positively or negatively to its occurrence. In his discussion of the above factors and research in this area, Włodarski et al. (1996) classifies them into three categories of variables each relating to the features of an individual learner, the cognitive ability of an individual and task characteristics (Table 1).

Table 1. Variables affecting transfer of learning (after Włodarski et al., 1996: 34—74)

Category	Variables	Relation to TL	Studies
1	2	3	4
Individual traits	*intelligence	— positive correlation: IQ & TL — different types of TL in normal *vs* retarded learners (general *vs* specific)	Bray et al., 1982; Budohoska & Czachowska, 1982
	*cognitive style	— superiority of reflexivity especially in more difficult tasks	Bendig, 1980; Nosal, 1990
	*motivation	— precision and depth of analysis leading to TL — negative role of anxiety in TL (MAS) — negative motivation (reinforcement decreased TL)	Wasserman, 1975;
	*age	— positive transfer with age (a critical period) — role of experience and — role of experience and knowledge — interference of prior knowledge and stereotypes (over 45 years of age)	Włodarski, 1977
Cognitive activity of an individual	*prior activity	— relation between the prior task and the present one increases TL — spontaneous and directed activity, analysis and manipulation — school training in generalizing	Godowikowa, 1984; Zak, 1980
	* autonomy	— self-dependence, stimulation — self-analysis of a problem — use of analogous materials (specific TL)	Korniejewa, 1978; Nikołajew, 1979

cont. table 1

1	2	3	4
Task/context specificity	* similarity	— similarity of stimuli in subsequent tasks (perceptual or semantic) — role of verbalizations and instruction in tasks — use of the same coding — generalizing increases TL	Kanak & Mehta, 1977; Kurcz, 1995
	*overlearning	— a positive correlation with TL (didactics)	Schneider & Fisk, 1984; de Corte, 1987
	* number of prior tasks	— negative correlation if more information is to be learnt (STM)	Wickens et al., 1986
	*variety of tasks	— different type of training (bottom-up & top-down processing) leads to generalization and application, contextualization — role of situational tasks	Zawadzka 1979; Szczerbo 1984
	*difficulty level	— mixed results related to the sequence: difficult-easy vs easy-difficult tasks	Budohoska & Włodarski 1977; Kuni et al., 1981
	*task structure	— similarity of structure (not semantic) increased TL, but varied results (structuring may also impede TL)	Hoffmann 1979
	*modality	— visual to auditory sequence: increase of TL (n overlap of coding)	Lehman & Brady 1982; Dean et al. 1983
	*timing	— no significant difference (immediate vs delayed task) in general rules transfer, only in recollection of elements (development of operations, organization of information) — activities in the break time (relaxation techniques)	Piaget & Inhelder 1968; Budohoska & Orłowksa 1970

TL — Transfer of Learning, MAS — Motivation-Anxiety Scale

Various researchers trying to find appropriate tools to measure learners' predisposition to transfer learning put forward the hypothesis that TL is directly

related to the approaches learners take to learning. Among others, Entwistle and K (1983) constructed the so-called Approaches to Student Inventory, later modified as ASSIST, i.e. Approaches and Study Skills Inventory for Students (Entwistle, Tait and Mc Cune, 2000). The approaches to learning are generally described as: deep — to understand; surface — to remember; strategic — to manage time and effort effectively. ASSIST evaluates learner profiles on sub-scales related to:

- deep level learning — Seeking Meaning, Relating Ideas, Use of Evidence;
- the surface — apathetic level — Lack of Understanding, Lack of Purpose, Syllabus Boundness;
- the strategic level — Organized Study, Time Management.

The so-called deep level learning relates directly to the learner's ability to perform critical thinking — understood as the ability to reflect on complex phenomena and transfer from one context to another — and problem solving abilities — understood as being able to diagnose a problem and/or find new solutions to an already diagnosed problem in order to repair it.

In his discussion of critical thinking, Seifert (1991: 211) defines certain pre--dispositions necessary for it to occur and divides them into more general (underlying) and specific abilities. The general predispositions consist of:

- seeking a clear statement of the thesis or question;
- seeking reasons for the problem;
- trying to be well-informed and using sources relevant to the main point;
- being open-minded and looking for alternative arguments/solutions;
- being precise in defining the problem and reasoning in a sequential manner;
- being sensitive to the position of others (relating to sources).

He also stresses the importance of specific skills necessary for successful critical thinking, such as:

1. Focusing on a question
2. Analyzing arguments
3. Asking and answering questions of clarification
4. Judging the credibility of a source
5. Observing and judging information from observations
6. Deducing and judging what follows from what
7. Inducing or generalizing from a number of observations and ideas
8. Making reasonable value judgments
9. Defining terms and judging others' definitions
10. Identifying assumptions
11. Deciding on an action
12. Communicating with others effectively (Seifert, 1991: 211)

Both general predispositions and specific abilities can be seen as necessary conditions for problem-solving to occur, as stated by Seifert (1991: 226):

> Critical thinking requires many cognitive abilities, including the ability to focus thinking, to analyze arguments, and to judge the credibility of information. […] Problem solving requires identifying the problem, defining the terms, exploring strategies for solving it, acting on possible solutions, and looking at the effects of solutions.

The development of critical thinking and problem-solving can be greatly enhanced if the learner's prior knowledge is activated in this process. Prior knowledge here means a person's actual knowledge:

> […] that is available before a certain learning task […] is structured in schemata […] is declarative and procedural […] is partly explicit and partly tacit […] which contains content knowledge […] which is dynamic in nature (Dochy, 1992: 50).

It seems that critical thinking and problem-solving can be seen as fundamental to transfer of learning, which can itself be considered a problem solving activity in which prior abilities, i.e. critical thinking and prior knowledge, are essential for it to take place.

3. Fostering TL in multilingual development: the role of formal instruction

Learning should be meaningful in Bruner's and Ausubel's understanding of the term. It means an active involvement and discovery of principles and relationships within complex concepts, together with expository teaching and role of advance organizers. This idea is unquestionably directly related to the phenomenon of TL and contributes to its fostering.

However, Seifert (1991), commenting on the importance of TL, suggests ways of fostering it in a classroom/formal instruction context which argue for the role of the teacher/instructor as essential: the teacher is seen as an organizer and a prompter. Indeed, we are presented with a teaching context which is very much teacher-dominated and does not leave the learner much space for active involvement and discovery as emphasized by Bruner. Seifert highlights the actions of teachers in fostering TL:

> First, whenever possible, they (teachers) can make learning situations similar to application situations. Second, they can highlight differences between learning and application that might cause inappropriate transfer. Thirdly, they can encourage overlearning or learning something so thoroughly that one makes no apparent improvements in performance. And fourthly, teachers can provide students with organizing ideas or principles to help them

learn material more thoroughly and recall it more automatically (Seifert, 1991: 183).

In the context of multilingual language learners/users, we focus on those who may be considered to be well-equipped with various "tools" to consciously or better automatically apply the principles of TL to their situations. The arguments for this belief come from the fact that:

1. they have multiple resources for the language development of yet another foreign language through multilingual reference systems (other languages);
2. they possess extensive learning experience — familiarity of experience;
3. they have already formulated principles, rules and organizing principles for acquiring and developing their knowledge in their own way (strategies);
4. they are familiar with linguistic systems at the explicit level of LA and metacognition.

So it seems that extensiveness of learning experience will allow both for the application of the theory of identical elements (in the case of languages learnt which are typologically related) and also coding systems (the use of similar strategies in learning). TL can then be understood in the multilingual learning context as operating at the level of competence (declarative knowledge) and performance (procedural knowledge).

Can the above resourcefulness of multilinguals also bring about negative transfer? Bearing in mind the variables affecting TL (Table 1), it seems that this multiplicity of resources may also result in negative TL. The case may be that too much (language) data is available for comparison and transfer, or that language material is already too structured in the learners' minds not allowing them the freedom of experimentation beyond the level of learning procedures adopted earlier (as observed by Hoffmann, 1979).

One of the factors not mentioned by Włodarski in his overview of research on TL (Table 1), as his discussion does not relate directly to FL instruction, is the language of instruction (language of teacher input) as a significant or otherwise variable in TL. It might be interesting to see to what extent the use of a FL (L2) as a language of instruction and non-L1 materials (L2 ones) used in class would promote TL in the language instruction given to multilinguals.

4. Language of instruction — some empirical data

4.1. Introductory comment

The studies of multilingual language performance and cross-linguistic influences observed in multilingual production (Williams and Hammarberg, 1998; Selinker

and Cohen-Baumgarten, 1995; Dijkstra and van Hell, 2001 and also my study — Gabryś-Barker, 2005) have demonstrated that:

- an L3 acquisition mechanism is different from that of L1 — learning L3 involves a similar mechanism to be activated, as was the case with L2;
- activation of the mechanisms leads to the activation of the language itself;
- suppression of L1 as a non-foreign and reference to another foreign language, i.e. L2 is a learning/processing strategy (Gabryś-Barker, 2005: 205).

The role of the surface language (the language of input) is seen to be significant not only in the context of typological similarity of languages (offering a possibility of positive language transfer) but also at the level of processing (e.g. in the use of similar strategies as in L2) — as it relates directly to the past learning experience of a foreign language. This then entails that L2 becomes not only a supplier language in terms of language features (similarities and differences) but also in terms of procedures applied in performance in the foreign language to be learnt.

4.2. Focus of the study

A modest pilot study has been designed to comment on the role of the language of input (understood here as the language of instruction and of didactic materials) in learning L3/L4 or even L5 (in the case of some of the subjects), as seen by the subjects themselves. The study does not measure objectively the degree of TL due to the language of input but rather the perceptions expressed by those exposed to this type of instruction.

The context in which the data was collected can be described as formal instruction in a subsequent foreign language (L3, L4 or L5) given to linguistically aware subjects — both in practical (learning experience of L2/L3) and theoretical terms (courses in linguistics and glottodidactics — theories of learning). The course which served as the source of data was an elementary course in Portuguese given to students of English (advanced level), with intermediate knowledge of another foreign language (mostly French or German) — also learnt formally in a classroom setting. The data was collected by means of a retrospective survey for beginning learners of Portuguese.

When describing the use of language of instruction used in their Portuguese classes, the subjects described it in the following proportions:

- L1 (Polish) — 20% — for explanatory purposes in linguistically and semantically more complex tasks;
- L2 (English) — up to 70% for the purposes of general explanation, giving instructions for tasks, making explicit comparisons between languages (L2—L3), using metalanguage — grammar concepts;

- L3/L4 (Portuguese) — 10% — for straightforward task instructions (what to do), examples of language/usage, off-task communication/chatting with the students (the instructor), songs. Interestingly, the principal reference text, the course-book used, was in the students' L2 (English). It was also based on a communicative approach to language instruction so often used as a template in EFL course-books. Thus the methodology of it was very familiar to the learners, who most probably used similar course-books when learning their L2. The course-book was evaluated very positively by the students who described it as:

(Very) practical, clear structure […], variety of tasks […], good gradation, not too fast […], encouraging […]

The supplementary materials and their authenticity — both in terms of language and type (the extensive use of songs was emphasized by all the informants) contributed to the creation of a facilitative context for TL to occur — as it was very similar to the learning experiences of the students in their L2 instruction. The exposure to L3 *via* L2 (in terms of language of instruction and methodology typical of EFL instruction) may be seen as activating not only their previous knowledge of a foreign language, but also ways of learning it. The methods and materials applied can be seen as facilitating *transfer of training* to the context of transfer of learning.

4.3. Learning L3 *via* L2 instruction: impeding or facilitating TL?

The multilingual informants in the study observed both the facilitative and impeding aspects of being exposed to instruction in L2 in the context of learning L3. The advantages of this type of language instruction were seen as (and they are presented in the order of frequency of comments):

— another possibility given to develop L2 — as presentation and practice in the classroom was carried out in English:

We sometimes get to know some new English words.
An opportunity to broaden the knowledge of not only Portuguese but also English.
We master both languages simultaneously.

— comparing L2 and L3 as linguistic systems:

We can notice the similarities between the these two languages as their origin is Latin.
[…] allows [us] to see the relations between English and Portuguese which makes it easier to memorize and understand Portuguese vocabulary.
Many words and some grammatical structures are quite similar and they can be easily linked.

— suppression of L1 — as communication (both on and off-task) was mostly carried out in English:

We do not think in Polish, it is better not to think in your mother tongue when learning a foreign language.

It helps to think in a foreign language when learning another foreign language
— a parallel learning experience (only one comment):
English as a foreign language constitutes some kind of a starting point for memorizing principles of Portuguese.

A comment on the facilitative aspect of L2 in L3 instruction made by the course instructor related only to its metacognitive level:
The terminology concerning grammar is same for Portuguese and English so it is easier to talk about these things simultaneously in English and Portuguese.

The subjects also observed some disadvantages in being exposed to L3 instruction *via* a foreign language, but they were by far less numerous and related to:
— impeding comprehension:
Dangers of misunderstanding.
There may be case when English explanation is not sufficient.
— relating to the lack of metalanguage in L2:
It may be annoying if you do not know metalanguage and cannot make head or tails of what's going on!
— learning experience itself and negative language transfer:
"Learning of Portuguese from the perspective of another foreign language may evoke some degree of confusion"
Portuguese may bear some marks of influence of English.
(The language of all the comments was not edited by me)

Summarizing the above comments made by the informants, it can be observed that the only aspect of TL consciously reflected upon was the close typological relation between the two foreign languages learnt and its facilitative (but not always — as one of the informants remarks) role, such as the use of lexical similarities between the two languages. What seems to be missing, but maybe only at the level of conscious reflection, is the activation of previous learning experiences — both at the level of cognition (transfer of strategies) and metacognition.

So other variables such as those mentioned in Table 1:
— task and context specificity (e.g. types of tasks used and their familiarity and similarity to the L2 tasks — mostly in terms of structure, similarity of stimulus and coding;
— a cognitive ability of an individual (e.g. use of familiar strategies of analysis and manipulation);
— an individual approach (as exemplified by personality traits, such as reflexivity and anxiety),
do not feature at all in the retrospective comments. A more elaborate study in terms of its research paradigm, including introspective comments or observed interactions between the language instructor and the students at the actual moment of language performance, would definitely contribute to the discussion on the role of language of instruction in TL. However, it is important to remember that TL operates not only at the subconscious level; its contribution to the learning proc-

ess becomes especially significant if it is conscious, in other words, if a learner can consciously reflect upon it as a process, to be able to make further transferences into other learning contexts. That is why it seems useful and valid to gather and analyse the subjects' perceptions on TL as a source of data.

5. Final comments on how to facilitate TL in language instruction to multilinguals

Trying to isolate the utility of essential assumptions and findings on TL, we can conclude with reference to the three theories of TL discussed earlier that each of them finds its applicability in fostering TL skills:

— the theory of formal discipline — the need for development of critical thinking and problem solving activities;
— the theory of identical elements — the need for raising awareness of similarities in differences not only between languages, but also in learning experience itself (both metacognitive and cognitive level of language learning) and in terms of language instruction, the need for similar methodology allowing for transfer of training;
— the theory of generalized principles — the need for teacher's guidance in formulating principles about learning in general and in the specific context.

Seifert (1991: 183) states that for TL to occur certain facilitative conditions have to be created. As mentioned before, these conditions can be achieved by:

> […] Making teaching similar to application
> […] Highlighting differences between learning and application
> […] Promoting overlearning
> […] Using Organizing ideas to clarify content.

On the level of glottodidactic practice these assumptions can be translated into the following principles of multilingual instruction:

— the need to create similar conditions in a class of multilinguals: analogous tasks and materials (or maybe multilanguage materials), as in their previous learning experience;
— the use of similar teaching methodology (if successful previously) — the need to inquire from the learners about their previous FL learning experience;
— the appropriate use of modality (visual to auditory);
— the activation of the first FL at the level of instruction by means of language of instruction (not L1 but L2 — as observed in this study);
— the use of tasks promoting overlearning.

Also bearing in mind the observations on different variables in the TL research (Table 1) and their either facilitative or impeding character, focus on the following may bring about TL:

— reflexivity as a way of developing language awareness (so much and so justifiably in prominence these days);
— the elimination of anxiety by referring to more secure L2 learning experiences;
— the use of prior knowledge (by emphasizing its relation to here-and now contexts);
— emphasis on the need for self-analysis of a learning problem by relating it to previous learning experiences.

The additional variable presented in the study data, that is to say, the language of instruction being a foreign language of the multilingual learners, is not seen by the language instructor of the subjects participating in the survey as a consciously chosen tool in his L3 teaching procedures:

[…] *I do not have any special feeling about using English in my Portuguese class. When I think of it, I would just as well talk in Polish.*

However, it has to be remembered that exposure to a foreign language (here in a form of instruction) instead of L1 instruction allows the subjects to switch off the processing mechanisms involved in thinking in their mother tongue (with their high degree of automaticity) and activate foreign language L2 mode (monitoring) and consequently the conscious transfer of mechanisms (TL). But as mentioned before, the confirmation of the way this activation occurs and facilitates TL will require more elaborate research to follow.

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